Class 07

Topics

- PropertyChangeListener Pattern
  - PropertChangeListener Interface
  - SimplePropertyDumper Example
  - SimpleStatsTimeVarying
- SimEventListener Pattern
  - SimEntityBase Implementation
  - Use of "Resonance" to Process SimEvents

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PropertyChangeListener

- Basics
  - When a state variable changes value in a Simkit model, it should fire a PropertyChangeEvent
  - This is done via the "firePropertyChange()" method, which is inherited form SimEntityBase
  - Many signatures possible. We have seen (String, int) and (String, int, int)
  - First argument is always the "name" of the property

- In a two-argument case, second argument in the new value
- In a three-argument case, second argument is old value, third is new value
- Objects may register "interest" in a PropertyChangeSource's PropertyChangeEvents by "addPropertyChangeListener()" method
- Must implement java.beans.PropertyChangeListener interface
- When PropertyChangeEvent is fired, all registered listeners "hear" the event via call to propertyChange(PropertyChangeEvent) method

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SimplePropertyDumper

- public void propertyChange (PropertyChangeEvent e) {

  System.out.println (e.getPropertyName () + ": " +

 e.getOldValue () + " => " + e,getNewValue ());
  }

SimpleStatsTimeVarying

- Keeps an instance variable of the name of the property for which it is listening

- If it hears a PropertyChangeEvent with that name, it updates its statistics:

```
public void propertyChange (PropertyChangeEvent e) {
    if (e.getPropertyName () .equals (myPropertyName) {
        newObservation( ((Number) e.getNewValue() ) .doubleValue());
    }
}
```
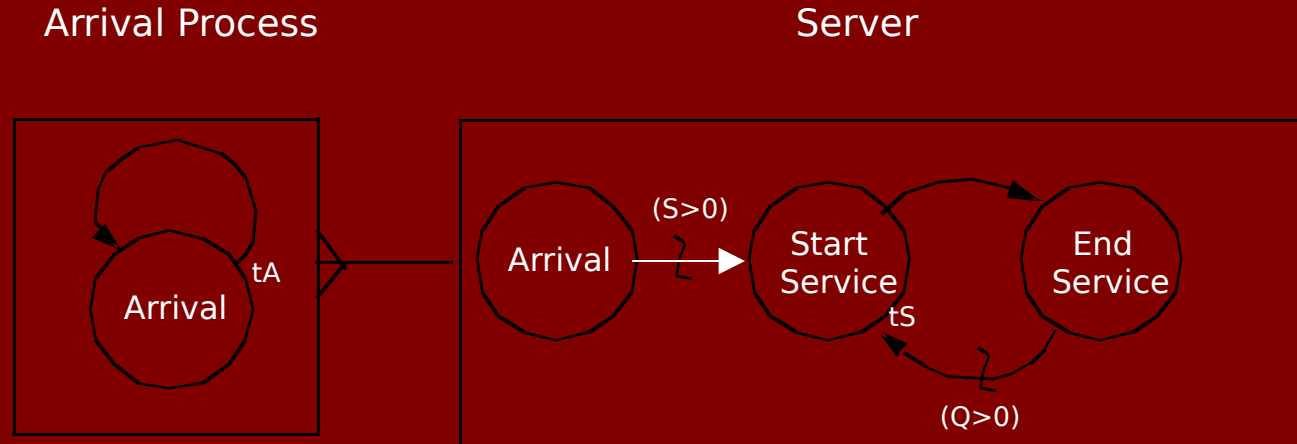
SimpleStatsTally

- Similar, except that the Tally algorithm is used

SimEventListener

Component 1
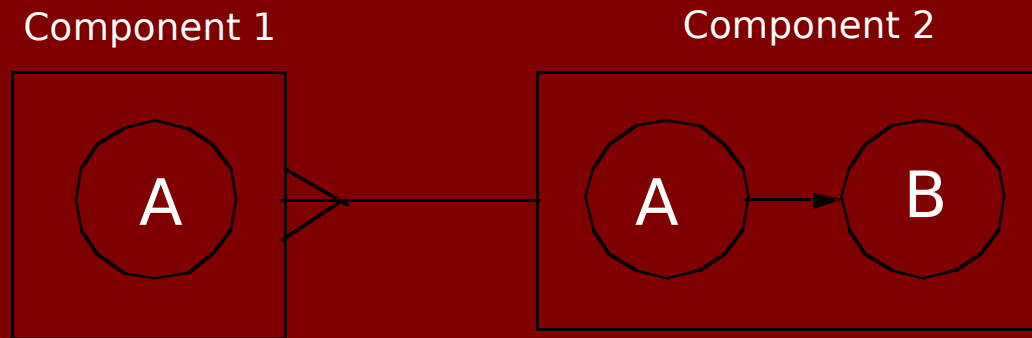
Component 2

When event A occurs in Component 1, then event A is triggered in Compon

one.addSimEventListener(two)

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Arrival Process   Server

main()): Arrival Process = new ????? (......);
          Server server = new Server (......);
          arrival.addSimEventListener(server)

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